

REMARKS

Claims 1 and 5-30 are all the claims pending in the application. The Examiner rejects claims 1 and 5-30 under 35 U.S.C. §102(e) as being anticipated by Kim et al. (US 2002/0141349).

Applicant respectfully requests acknowledgement of foreign priority under 35 U.S.C. §119(a)-(d) to claim the benefit of the Korean Application No. 10-2002-0078797 filed on December 11, 2002 and No. 10-2002-79101 filed on December 12, 2002

§ 102(e) Rejection

Claims 1 and 5-30 have been rejected under 35 U.S.C. §102(e) as being anticipated by Kim.

A proper rejection for anticipation under §102 requires complete identity of invention. The claimed invention, including each element thereof as recited in the claims, must be disclosed or embodied, either expressly or inherently, in a single reference. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991); Standard Havens Prods., Inc. v. Gencor Indus., Inc., 953 F.2d 1360, 1369, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991).

Independent claim 1:

Kim is directed to a method for controlling a data transmission rate on a reverse link comprising the steps of determining an interference level at a base station due to signals from the mobile stations served by the base station; determining a transmission energy level required for each mobile station; comparing the interference level with the transmission energy level to obtain a comparison result for each mobile station; and adjusting a data transmission rate for each mobile station based upon the comparison result sent via a common channel on a forward link to each mobile station in a dedicated manner. (See, Kim App., para. 0071.)

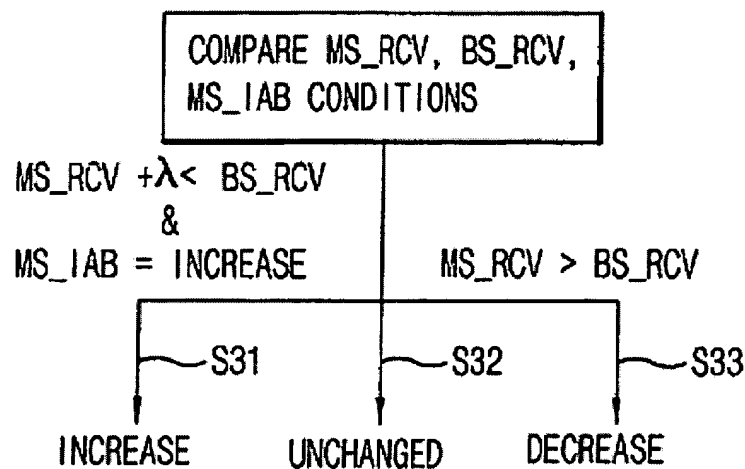
The present invention is also directed to a method for setting a Reverse Activity Bit (RAB), wherein the RAB is used to control the transmission rate of information between a

mobile station and a base station. Both Kim's method and the present invention use "rise over thermal" (ROT) to measure the total amount of noise over thermal noise in a signal at a base station. Both compare the ROT with a threshold value, and both adjust a parameter to control the data transmission rate. The differences between Kim and the present invention lie in how the adjustment is determined.

When deciding to control the reverse transmission rate, the present invention incorporates the rate of change of thermal noise. Claim 1 recites the limitation of a base station monitoring a variation rate (ROT_v) of the ROTm (measured thermal noise relative to the received signal power), dividing the ROTm into at least two groups according to the ROT_v, and controlling the reverse transmission rate according to at least one of the ROTm states. The ROT_v is the rate of change of ROTm.

Kim does not teach controlling the reverse transmission rate according to a rate of change of the ROT. As shown in Fig. 9 below,

FIG. 9



The RCB (reverse control bit) is set according to the variables MS_RCV (mobile station rate control value), BS_RCV (base station rate control value), and MS_IAB (mobile station rate

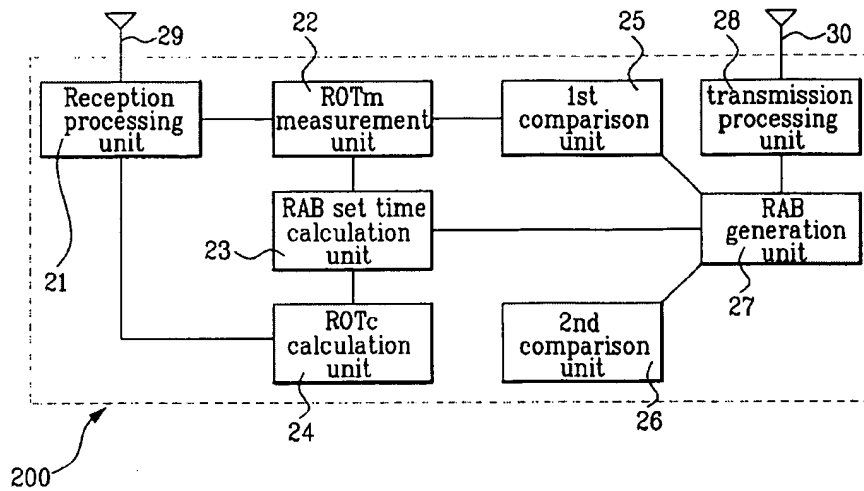
increase available bit). None of these variables include a rate of change of the ROT. The MS_RCV relates to a reception energy level for each data rate (*see*, Kim, paragraphs 0095-0102); MS_IAB is a flag that indicates whether a particular mobile has any capacity to raise its transmission rate (*see*, Kim, paragraph 0104); and BS_RCV is a parameter defined to determine the total number of mobile seen by a base station (*see*, Kim, paragraph 0118).

In rejecting claim 1, the Examiner directs the applicants' attention to Kim, paragraphs 0045-0047, 0071-0073, and 0119-0129. However, nothing in these paragraphs teaches the limitation of "setting a reverse activity bit (RAB) [by] ... measuring a rise over thermal noise-measured (ROTm) ... monitor[ing] a variation state of the ROTm ... dividing the ROTm into at least two states ... [and] setting the RAB to lower the data rate according to one of the at least two states." While Kim teaches a method of controlling the RCB (equivalent to the application's RAB) according to the ROT, Kim does not consider the rate of change of the ROT when controlling the RCB. If the Examiner disagrees, then applicants respectfully request that the Examiner particularly point out in the cited portions of Kim where controlling the RAB using the rate of change of the ROT is taught. Therefore, Kim does not teach all the limitations of claim 1 and does not anticipate claim 1. For at least this reason, applicants respectfully assert that claim 1 and all claims depending therefrom are allowable over Kim.

Dependent claim 6:

Kim relies upon a detected (or measured) ROT for adjusting the data transmission rate. *See*, Kim, paragraph 0119. Claim 6 teaches the limitation of using a calculated ROT wherein the calculated ROT is based upon the loading of the reverse link and the RAB set time. As shown in Fig. 2 below,

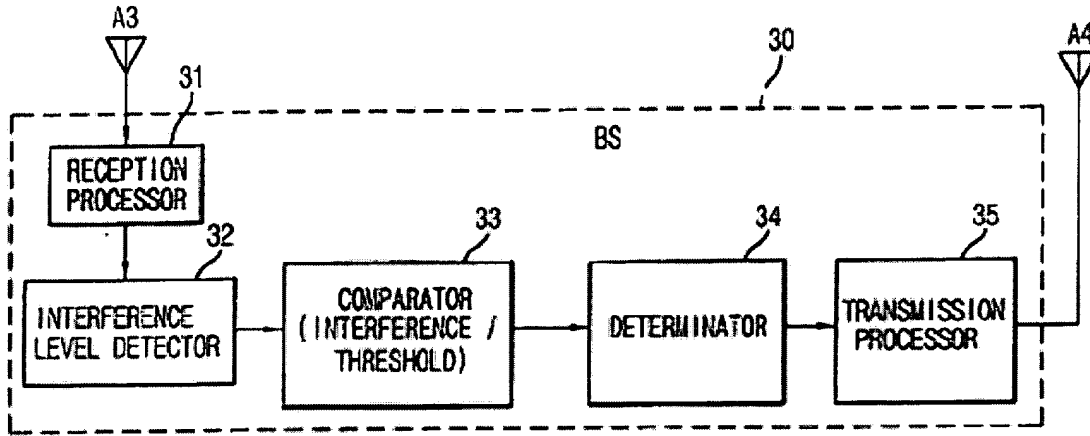
FIG. 2



the base station includes a ROTc calculation unit, element 24. ROTc is the ratio of reception pilot power and total reception power for each data rate multiplied by a total of $f(\text{DataRate})$ value of all access terminal in a sector. *See*, application, paragraph 0064.

A block diagram for Kim's base station (shown below) has an interference detector (element 31) for measuring the ROT. This interference detector is equivalent to the application's ROTm measurement unit (Fig. 2, element 22). However, since Kim does not calculate ROT, but only measures it, Kim has no equivalent of and does not teach the application's ROTc calculations unit.

FIG. 3



Because Kim does not teach or suggest this limitation, and Applicant asserts that for at least this reason as well, claim 6 and those claims depending from claim 6 are allowable as well.

Independent claim 15:

Claim 15 includes the limitations of a RAB set time calculation unit wherein the RAB set time calculation unit divides the ROT into at least two states, and wherein the RAB generation unit uses the RAB set time for lowering the data rate in each of the ROT states. The analysis for claim 15 is similar to the analysis for claim 1. These limitations are not taught nor suggested by Kim, and therefore Applicant asserts independent claim 15 and all claims dependent therefrom are allowable for at least this reason.

Independent claim 23:

As with claim 6, claim 23 includes the limitation of a ROT variation rate calculation unit whereas Kim does not teach or suggest this limitation. Kim compares the detected ROT against at least one threshold value, but does not compute the rate of change of the detected ROT value for use in further computations. Because Kim does not teach or suggest the limitation of a ROT

variation rate calculation unit, Applicant asserts independent claim 23 and all claims dependent therefrom are allowable for at least this reason.

Dependent claims 5-14, 16-22, and 24-30:

Each of the above listed dependent claims depends from an allowable independent claim and is therefore allowable. Applicant respectfully request reconsideration and withdrawal of the rejection.


CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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By: _____


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